Chapter 2. STATEMENT OF NEED FOR THE REGULATIONS

2.1 Introduction

Congress passed the Clean Air Act (CAA) to protect public health and the environment from the adverse effects of air pollution. This section summarizes the statutory requirements affecting the development of the RH rule, briefly describes the health and welfare effects associated with controls to reduce RH, and States the need for regulatory action at this time.

2.2 Statutory Authority and Legislative Requirements

The Environmental Protection Agency (EPA) is promulgating the RH rule to achieve reasonable progress towards the national visibility protection goal. In 1977, Congress set forth a national visibility goal in section 169A of the CAA that calls for "the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution." In 1980, EPA adopted rules designed to be the first phase in EPA's overall program to protect visibility. The EPA's 1980 visibility regulations address visibility impairment that is "reasonably attributable" to a single source or small group of sources. The EPA explicitly deferred action addressing RH impairment until some future date "when improvement in monitoring techniques provides more data on source-specific levels of visibility impairment, regional scale models become refined, and our scientific knowledge about the relationships between emitted air pollutants and visibility impairment improves." (U.S. EPA, 1997a).

Congress added section 169B as part of the 1990 CAA Amendments to focus attention on RH issues. Section 169B(f) calls for EPA to establish a visibility transport commission to assess scientific and technical information pertaining to RH in the Grand Canyon National Park. The final report from the Grand Canyon Visibility Transport Commission, "Recommendations for Improving Western Vistas," was completed in June 1996. Section 169B(e) calls for the Administrator, within 18 months of receipt of the Commission's report, to carry out her "regulatory responsibilities under section [169A], including criteria for measuring 'reasonable progress' toward the national goal." (U.S. EPA, 1997a)

2.3 Authority for this RIA

Pursuant to Executive Order (E.O.) 12866, this Regulatory Impact Analysis (RIA) assesses the costs, economic impacts, and benefits associated with the implementation of the final RH rule. E.O. 12866 states that:

> "Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary or compelling by public need . . . . In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures . . . and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits . . ., unless a statute requires another regulatory approach."

The Unfunded Mandates Reform Act of 1995 (UMRA) (PL 104-4), in title II, section 201, directs agencies "unless otherwise prohibited by law [to] assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector . . . ." Section 202 of title II directs agencies to provide a qualitative and quantitative assessment of the anticipated costs and benefits of a Federal mandate resulting in annual expenditures of $100 million or more, including the costs and benefits to State, local, and tribal governments, or the private sector. Section 205 requires that the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule be selected or that the Agency provide an explanation of why such an alternative was not selected. This section applies only when a written statement is required under section 202. Section 204 requires each Agency to develop a process to permit State, local and tribal officials to provide meaningful and timely input in the development of regulatory proposals containing significant Federal intergovernmental mandates.

The RH rule sets forth a program to provide for visibility improvements in mandatory Class I Federal areas, but provides considerable discretion to the States in establishing reasonable progress goals. This RIA fulfills the UMRA section 202 requirement by analyzing the costs and benefits of illustrative progress goals and emission management strategies in 2015, a year near the end of the first long term progress period. In view of the discretion the rule would provide the States in setting reasonable progress goals, the RIA analyzes visibility progress in going from benchmark to baseline conditions, control strategies for four nationally uniform illustrative goals, as well as a control strategy for a set of goals which vary among regions.

The benchmark represents the visibility levels from which progress is measured. Baseline represents the resulting visibility levels from creditable CAA programs such as those to implement the ozone and particulate matter National Ambient Air Quality Standards (which were promulgated in 1997) and the Tier II Mobile Sources Rule. These programs result in substantial

emission reductions and air quality improvements, including improved visibility at Mandatory Class I federal areas.

The four illustrative goals are described more fully in Chapter 3. However, they are as follows:

- o 1.0 deciview improvement in 15 years (0.67 deciview improvement in 10 years)
- o 1.0 deciview improvement in 10 years
- o 5% deciview improvement in 10 years
- o 10% deciview improvement in 10 years

The RIA considers establishment of these goals at a national level. The RIA also considers establishment of one of those goals or baseline conditions at a regional level (e.g. Midwest/Northeast, Southeast, South Central, Rocky Mountain, West, and Northwest). With the potential flexibility to establish reasonable goals, including progress reflecting baseline conditions, the incremental costs, benefits, and economic impacts of the regional haze (RH) rule could be zero during the first long term strategy period. This may result if there is substantial progress due to implementation of other CAA programs. Hence, a lower bound estimate of the incremental effects of the RH rule is zero. In this situation, all the benefits (including visibility improvements at Mandatory Class I areas), costs, and impacts would be charged to the other CAA programs.

Adoption of the other illustrative goals could mean further emission reductions of RH precursors in some Class I areas. These emission reduction requirements could result in estimated costs and benefits, incremental to baseline conditions, which could exceed $100 million annually in 2015, a year near the end of the first long term progress period. Of course, with potential flexibility to establish other reasonable goals and design more cost-effective emission management strategies, the cost could be less than estimated in the RIA.

The UMRA section 204 consultation requirement was met by providing numerous opportunities for State, local and tribal governments to provide input during development of the RH rule as described in the preamble to the final rule.

The Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) provides that, whenever an agency is required to publish a general notice of rulemaking for a rule, the Agency must prepare regulatory flexibility analyses for the proposed and final rules unless the Agency certifies that it will not have a significant economic impact on a substantial number of small entities. The EPA explained in the preamble to the proposed RH rule that the rule would not have a significant adverse economic impact on a substantial number of small entities. In fact, the RH rule applies to the States and does not itself establish any requirements applicable to small entities. **The Agency has thus certified that the RH rule will not have a significant economic impact on a substantial number of small entities.**

To provide additional information to the States and small entities, the Agency has conducted general analyses of the potential cost impacts on small entities of different control measures. These measures may be among those which the States consider in developing an emission management strategy to achieve the reasonable progress goals established by the States. These general analyses also identify ways to mitigate or avert potentially significant impacts and are included in this RIA. It is important to recognize that these general analyses are speculative. Moreover, the EPA expects the States may take steps to minimize significant impacts as part of their goal establishment and emission management strategy development process.

Under Executive Order 12875, Enhancing the Intergovernmental Partnership, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. The RH rule does not create a mandate on State, local or tribal governments. The States determine the direct compliance requirements on State, local or tribal governments as the States design and implement emission management strategies to achieve reasonable progress goals.

This final rule is not subject to E.O. 13045, entitled Protection of Children from Environmental Health Risks and Safety Risks, because is does not involve decisions on environmental health risks or safety risks that may disproportionately affect children.

Under E.O. 13084, Consultation and Coordination with Indian Tribal Governments, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. The RH rule does not significantly or uniquely affect the communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

The Information Collection Request (ICR) for the proposed rule relating to State requirements for the protection of visibility in Mandated Class I national parts and wilderness areas were submitted to the Office of Management and Budget (OMB) for review under the Paperwork Reduction Act, 44 U.S.C. 3501, et seq. This ICR was denied. A new ICR has been prepared by EPA and will be submitted to OMB for approval. [A copy of ICR No. 1813.02 may be obtained from Sandy Farmer, Information Policy Branch; EPA; 401 M St., SW (Mailcode 2137); Washington DC 20460; by calling (202) 260-2740; or from the internet at www.epa.gov/icr. The reporting burden and administrative costs resulting from this action in the first reporting period (1999-2002) are summarized in Chapter 7 of this RIA.

Executive Order 12898 (Environmental Justice) requires that each Federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs,

policies, and activities on minorities and low-income populations. The RH rule does not establish visibility progress goals or emission management strategies. The rule does, however, establishes a framework in which the States accomplish those objectives.

Regardless, in the benefit analysis of the RIA, the available information on visibility, human health, soiling, and other effects categories for all susceptible populations is used to develop monetized estimates. Where monetization is not possible, omitted benefit categories are identified. Furthermore, the scope of the benefit analysis includes air quality improvements within as well as outside the Class I areas.

For air quality improvements at Mandatory Class I national parks and wilderness areas, the benefit analysis includes direct use as well non-use values. Not all Americans have the time and income to visit these national parks and wilderness areas. By taking into account, the preferences of those who visited the parks as well as others, the RIA illustrates the importance of ensuring that the preferences of all stakeholders are reflected in the monetized benefit estimates. The details of the benefit analysis are described in Chapter 9 of this RIA.

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub L. No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (e.g. materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and voluntary consensus standards. This rule does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

2.4 **Key Health and Welfare Effects**

The RH is produced from a multitude of sources and can impair visibility in every direction over a large area, possibly over several states. The RH masks objects on the horizon and reduces the contrast of nearby objects. The formation, extent, and intensity of RH is a function of meteorological and chemical processes, which sometimes cause fine particle loadings to remain suspended in the atmosphere for several days and to be transported hundreds of kilometers from their sources. It is this type of visibility degradation that is principally responsible for impairment in national parks and wilderness areas across the country. Visibility in urban areas may be dominated by local sources, but may be significantly affected by long-range transport of haze as well. Fine particles transported from urban areas in turn may be significant contributors to regional-scale visibility impairment.

Visibility has direct significance to people's enjoyment of daily activities in all parts of the country. Individuals value good visibility for the well-being it provides them directly, both in the

places where they live and work, and in the places where they enjoy recreational opportunities. Visibility is also highly valued because of the importance people place on protecting nationally-significant natural areas.

Twenty years ago, when initially adopting the visibility protection provisions of the CAA, Congress specifically recognized that the "visibility problem is caused primarily by emission into the atmosphere of sulfur dioxide, oxides of nitrogen and particulate matter, especially fine particulate matter from inadequately controlled sources."[H.R. Rep. No. 95-294 at 204 (1977)] The fine PM (e.g., sulfates, nitrates, organic and elemental carbon, and soil dust) that impair visibility by scattering and absorbing light are among the same particles related to serious health effects and mortality in humans, as well as to environmental effects such as materials damage, soiling, and acid deposition. The health and other welfare effects of fine PM have been extensively discussed in previous EPA RIA's (U.S. EPA 1997d).

2.6 References

U.S. Environmental Protection Agency (1989), Review of the National Ambient Air Quality Standards for Ozone: Assessment of Scientific and Technical Information. Office of Air Quality Planning and Standards; Research Triangle Park, N.C.; EPA report no. EPA-450/2-92/001.

U.S. Environmental Protection Agency (1996a), Air Quality Criteria for Ozone and Related Photochemical Oxidants. Office of Research and Development; Office of Health and Environmental Assessment; Research Triangle Park, N.C.; EPA report nos. EPA/600/P-93/004aF-cF.

U.S. Environmental Protection Agency (1996b), Air Quality Criteria for Particulate Matter. Office of Research and Development, Office of Health and Environmental Assessment; Research Triangle Park, N.C.; EPA report no. EPA/600/P-95/001aF; April.

U.S. Environmental Protection Agency (1996c), Review of the National Ambient Air Quality Standards for Ozone: Assessment of Scientific and Technical Information. Office of Air Quality Planning and Standards; Research Triangle Park, N.C.; EPA report no. EPA/4521R-96-007.

U.S. Environmental Protection Agency (1996d), Review of the National Ambient Air Quality Standards for Particulate Matter: Assessment of Scientific and Technical Information. Office of Air Quality Planning and Standards; Research Triangle Park, N.C.; EPA report no. EPA/4521R-96-013.

U.S. Environmental Protection Agency (1997a), **Draft** Notice of Proposed Rulemaking for Revisions to Existing Visibility Protection Regulations (40 CFR 51.300-307) to Address

RH (RH Preamble). Office of Air Quality Planning and Standards; Research Triangle Park, N.C.**; June**.

U.S. Environmental Protection Agency (1997b), **Draft** National Ambient Air Quality Standards for Ozone--Final Decision (Ozone Preamble). Office of Air Quality Planning and Standards; Research Triangle Park, N.C.**; May.**

U.S. Environmental Protection Agency (1997c). **Draft** National Ambient Air Quality Standards for Particulate Matter--Final Decision (PM Preamble). Office of Air Quality Planning and Standards; Research Triangle Park, N.C.**; May.**